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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/530,489 | ROBA ET AL. | |
| | Examiner | Art Unit | |
| | MICHAEL P. MOONEY | 2883 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *53-112* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *53-112* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *4/6/05* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/22/09, 4/6/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

Upon further consideration, the prior non-final rejection mailed 7/23/09 is vacated. The following action is made to more robustly address issues. All prior restriction requirements are hereby withdrawn and, therefore, all of the pending claims 53-112 are considered on their merits infra.

### *Drawings*

Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

The corrections to the Specification in the 4/6/05 Preliminary Amendment are acknowledged. The disclosure is objected to because of the following informalities: on page 23 of the Specification, the "Brief Description of the Drawings" neither lists nor briefly describes figure 3.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 53-60, 106-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hale (5822489).**

Hale teaches an optical fiber comprising: a glass portion (e.g., col. 1 lines 5-25; col. 5 lines 10-21); and at least one protective coating layer disposed to surround said glass portion (e.g., col. 3 lines 1-26; col. 1 lines 5-25, 48-53; col. 5 lines 10-21); said protective coating layer having a modulus of elasticity value (e.g., col. 3 lines 1-26; col. 1 lines 5-25, 48-53).

Although Hale does not expressly state "between -40.degree. C. and +60.degree. C. between 5 MPa and 600 MPa" the claimed range for modulus of elasticity value is rendered as obvious under the principle of obviousness of ranges discussed in the MPEP as follows:

**2144.05 Obviousness of Ranges**

I. OVERLAP OF RANGES

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Geisler, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997) (Claim reciting thickness of a protective layer as falling within a range of "50 to 100 Angstroms" considered prima facie obvious in view of prior art reference teaching that "for suitable protection, the thickness of the protective layer should be not less than about 10 nm [i.e., 100 Angstroms]." The court stated that "by stating that suitable protection' is provided if the protective layer is about' 100 Angstroms thick, [the prior art reference] directly teaches the use of a thickness within applicant's] claimed range."). Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of "having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium" as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).

Since Hale teaches values within claim 53's stated ranges at, e.g., at Hale col. 3 lines 1-26, col. 1 lines 5-25, and col. 4 lines 30-45, the above principle of obviousness of ranges applies to render the range(s) of claim 53 as prima facie obvious under Hale (see MPEP 2144.05).

Thus claim 53 is rejected.

Similarly, the aforementioned principle of obviousness of ranges also applies to the ranges stated in claims 54-58. The ranges/values stated in Hale at e.g., col. 3 lines 1-26, col. 1 lines 5-25, and col. 4 lines 30-45 render the ranges stated in claims 54-58 as prima facie obvious under the principle of obviousness of ranges (see MPEP 2144.05). Thus claims 54-58 are rejected.

Each and every element of each of claims 59, 60 is rendered as obvious by the reasons and references given above and/or principles that were conventionally known to one of ordinary skill in the art at the time the invention was made (e.g., col. 1 lines 10-52, col. 3 lines 7-25, col. 5 lines 1-25). Thus claims 59, 60 are rejected.

By the reasons and references given above and/or principles conventionally known to one of ordinary skill in the art at the time the invention was made, each and every element of each of method claims 106-111 is rendered as obvious under Hale. It is further noted that it was conventionally known at the time the invention was made that the elastic modulus values presented by Hale such as those referenced above help to control attenuation losses due to microbending (e.g., col. 3 lines 1-26, col. 1 lines 5-25, and col. 4 lines 30-45). Thus claims 106-111 are rejected.

**Claims 53, 61-106, 112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya et al. (6528553).**

Komiya et al. teaches an optical fiber comprising: a glass portion (e.g., col. 1 lines 25-27); and at least one protective coating layer disposed to surround said glass portion; said protective coating layer having a modulus of elasticity value between 0.1 MPa and 2000 MPa or more (col. 10 lines 62-67).

Although Komiya does not expressly state the range "between 5 MPa and 600 MPa" it would have been obvious via the principle of obviousness of ranges (see MPEP 2144.05) since "between 5 MPa and 600 MPa" falls within the range "0.1 MPa and 2000 MPa" (col. 10 lines 62-67). Furthermore the temperature range "between -40.degree. C. and +60.degree. C" is also obvious via the principle of obviousness of ranges (see MPEP 2144.05) since it was conventionally known at the time the invention was made to choose a temperature range at least partially within the range "between -40.degree. C. and +60.degree. C".

Thus claim 53 is rejected.

Komiya et al. teaches wherein the protective coating is obtained by curing a radiation curable composition comprising: (a) at least one ethylenically unsaturated polyurethane (col. 3 lines 5-15).

Although Komiya does not expressly state "having a glass transition temperature (T.sub.g) between -40.degree. C. and -100.degree. C.", Komiya does state a Tg between -70 and 30 degrees Celsius (e.g., col. 11 lines 10-13, 25-30). Therefore, the range "between -40.degree. C. and -100.degree. C." is rendered as prima facie obvious under the principle of obviousness of ranges (see MPEP 2144.05).

Furthermore, Komiya et al. teaches at least one polyfunctional reactive diluent monomer (e.g., columns 7-8).

Thus claim 68 is rejected.

Although Komiya does not expressly state "glass transition temperature (T.sub.g) between -50.degree. C. and -85.degree. C", Komiya does state a Tg between -70 and 30 degrees Celsius (e.g., col. 11 lines 10-13, 25-30). Therefore, the range "between -50.degree. C. and -85.degree. C" is rendered as prima facie obvious under the principle of obviousness of ranges (see MPEP 2144.05). Thus claim 69 is rejected.

Komiya et al. teaches wherein the ethylenically unsaturated polyurethane (a) is obtained by reacting the following compounds: (A) at least one polyol compound comprising a structural unit represented by the formula (I) shown in claim 70 (e.g., col. 2 lines 20-67): wherein n is an integer from 0 to 4 inclusive; R.sub.1, R.sub.2, R.sub.3, R.sub.4, R.sub.5 and R.sub.6, which may be equal or different from each other, represent a hydrogen atom or a C.sub.1-C.sub.4 alkyl

group (e.g., col. 2 lines 24-67; polypropylene glycol); (B) at least one polyisocyanate compound (e.g., col. 2 lines 24-67); and (C) at least one (meth)acrylate compound containing at least one hydroxyl group (e.g., col. 2 lines 55-67). Thus claim 70 is rejected.

Komiya et al. teaches wherein the polyol compound (A) is selected from compounds obtained by polymerizing at least one compound selected from ethylene glycol, polyethylene glycol, propylene glycol, polypropylene glycol, tetramethylene glycol, 2-alkyl-1,4-butanediol and 3-alkyl-1,4-butanediol; compounds obtained by ring-opening polymerization of 2-alkyl-tetrahydrofuran or 3-alkyl-tetrahydrofuran; compounds obtained by copolymerization of 2-alkyl-tetrahydrofuran, 3-alkyl-tetrahydrofuran or 2-alkyl-1,4-butanediol, with a cyclic ether, or mixtures thereof (e.g., col. 2 lines 24-67; polypropylene glycol). Thus claim 71 is rejected.

Komiya et al. teaches wherein the cyclic ether is selected from ethylene oxide, propylene oxide or tetrahydrofuran, or mixtures thereof (e.g., col. 4 lines 13-47). Thus claim 72 is rejected.

Komiya et al. teaches wherein the polyol compound (A) is selected from polybutadiene with a terminal hydroxyl group, hydrogenated polybutadiene with a terminal hydroxyl group, polyisobutylene polyol, 1,6-hexanediol, neopentyl glycol, 1,4-cyclohexane dimethanol, bisphenol A, bisphenol F, alkylene oxide adducts of bisphenol A, alkylene oxide adducts of bisphenol F, dimethylolized compound of dicyclopentadiene, polyester diols, polycaprolactone diols, polycarbonate diols, or mixtures thereof (e.g., col. 5 lines 33-40). Thus claim 73 is rejected.

Komiya et al. teaches wherein the polyisocyanate compound (B) is selected from polyisocyanates of 2,4-tolylenediisocyanate, 2,6-tolylenediisocyanate, 1,3-xylenediisocyanate, 1,4-xylenediisocyante, 1,5-naphthalenediisocyanate, m-phenylenediisocyanate, p-

phenylenediisocyanate, 3,3'-dimethyl4,4'-diphenylmethanediisocyanate, 4,4'-diphenyl-methanediisocyanate, 3,3'-dimethylphenylenediisocyanate, 4,4'-biphenylenediisocyanate, 1,6-hexamethylenediisocyanate, isophoronediisocyanate, methylenebis(4-cyclohexylisocyanate), 2,2,4-trimethylhexamethylenediisocyanate, 2,4,4-trimethylhexamethylenediisocyanate, 1,4-hexa-methylenediisocyanate, bis(2-isocyanateethyl)fumarate, 6-isopropyl-1-,3-phenyldiisocyanate, 4-diphenylpropaneisocyanate, lysinediisocyanate, or mixtures thereof (e.g., col. 5 line 56 to col. 6 line 10). Thus claim 74 is rejected.

Komiya et al. teaches wherein the (meth)acrylate compound having at least one hydroxyl group (C) is selected from 2-hydroxyethyl-(meth)acrylate, 2-hydroxypropyl (meth)-acrylate, 2-hydroxy-3-phenyloxypropyl (meth)-acrylate, propanediol(meth)acrylate, 1,4-butanediolmono(meth)acrylate, 2-hydroxyalkyl-(meth)acryloyl phosphate, 4-hydroxycyclohexyl(meth)acrylate, 1,6-hexanediol-mono(meth)acrylate, neopentylglycolmono(meth)-acrylate, trimethylolpropane-di(meth)acrylate, trimethylolethanedi(meth) acrylate, penta-erythritholtri(meth)acrylate, dipenta-erythritolpenta(meth)acrylate, (meth)acrylates represented by the following formulae (II) or (III): wherein R.sub.5 represents a hydrogen atom or a methyl group and n is an integer of from 1 to 15 inclusive; or mixtures thereof (e.g., col. 6 lines 8-15). Thus claim 75 is rejected.

Komiya et al. teaches wherein the polyfunctional reactive diluent monomer (b) is selected from ethylene glycol di(meth)acrylate, tetraethylene glycol di(meth)acrylate, propanediol di(meth)acrylate, 1,4-butanediol di(meth)acrylate, trimethylolpropane di(meth)acrylate, trimethylolpropane tri(meth)acrylate, neopentyl glycol di(meth)acrylate, 1,6-hexanediol di(meth)acrylate, 1,6-hexamethylenedihydroxy di(meth)acrylate, polyethylene glycol

di(meth)acrylate, polypropylene glycol di(meth)acrylate, hydroxypivalic acid neopentyl glycol ester di(meth)acrylate, trimethylolpropane tri(meth)acrylate, trimethylolpropanetrioxyethyl (meth)acrylate, tricyclodecanedimethanol di(meth)acrylate, dicyclopentadiene di(meth)acrylate, pentaerythritol tri(meth)acrylate, pentaerythritol tetra(meth)acrylate, pentaerythritol trioxyethyl (meth)acrylate, pentaerythritol tetraoxyethyl (meth)acrylate, di(meth)acrylate of a diol, the addition compound of ethylene oxide or propylene oxide with bisphenol A, hydrogenated bisphenol A glycidyl ether of bisphenol A, or mixtures thereof (e.g., col. 8 lines 28-45). Thus claim 76 is rejected.

Komiya et al. teaches wherein the polyfunctional reactive diluent monomer (b) is 1,6-hexane diol diacrylate, pentaerythritol triacrylate, or a mixture of pentaerythritol triacrylate and pentaerythritol tetraacrylate (e.g., col. 8 lines 28-45). Thus claim 77 is rejected.

Komiya et al. teaches wherein the radiation curable composition comprises at least one polymerization initiator (c) (e.g., col. 9 lines 14-32). Thus claim 78 is rejected.

Komiya et al. teaches wherein the polymerization initiator [PI] (c) is selected from benzophenone, benzoin, benzoinisobutyl ether, benzyl, benzoinethyl ether, 2,2-dimethoxy-2-phenylacetophenone, xanthone, fluorenone, 4-chlorobenzophenone, triphenylamine, carbazole, 3-methylacetophenone, 4,4'-dimethyoxybenzophenone, 4,4'-diaminobenzophenone, Michler's ketone, benzoin propyl ether, acetophenone diethyl ketal, benzoin ethyl ether, 1-hydroxycyclohexylphenyl ketone, 2-hydroxy-2-methylpropiophenone, 4'-isopropyl-2-hydroxy-2-methylpropiophenone, .alpha.,.alpha.-dichloro-4-phenoxy-acetophenone, benzyl dimethyl ketal, 2,2-diethoxyacetophenone cholorothioxantone, 2-isopropylthioxantone, diethylthioxantone, 3,3-dimethyl-4-methoxybenzophenone, 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropanone,

.alpha.-hydroxycyclohexylphenyl ketone, 2,4,6-trimethylbenzoyldiphenylphosphine oxide, or mixtures thereof (e.g., col. 9 lines 14-32). Thus claim 79 is rejected.

Komiya et al. teaches wherein the radiation curable composition comprises at least one photo-sensitizer (f) (e.g., col. 9 lines 39-46). Thus claim 80 is rejected.

Komiya et al. teaches wherein the photo-sensitizer (f) is selected from amines, ureas, phosphorus compounds, sulfur compounds, nitrils, or mixtures thereof (e.g., col. 9 lines 39-46). Thus claim 81 is rejected.

Regarding claim 82, although Komiya et al. does not explicitly state the amount of photosensitizer used, Komiya et al. does teach the specific range of photopolymerization initiator [PI] used: 0.1 to 10 wt % (e.g., col. 9 lines 46-55). It was conventionally known at the time the invention was made to use anywhere from one half to 2 or 3 times the weight percent of the amount of photopolymerization initiator [PI] used for the amount of photosensitizer (i.e., the amount of photosensitizer could be from anywhere from ½ to 2-3 times the amount of PI used by weight). Therefore, "wherein the polymerization initiator (c) and the photo-sensitizer (f) are present in the radiation curable composition in a total amount of from 0.01% by weight to 10% by weight with respect to the total weight of said radiation curable composition" is rendered as obvious by Komiya et al. via the principle of obviousness of ranges [MPEP 2144.05] (e.g., col. 9 lines 46-55). Thus claim 82 is rejected.

Komiya et al. teaches wherein the radiation curable composition comprises at least one monofunctional reactive diluent monomer (d) [e.g., col. 6 line 66 to col. 8 line 27]. Thus claim 83 is rejected.

Komiya et al. teaches wherein the monofuctional reactive diluent monomer (d) is selected from 2-hydroxyethyl (meth)acrylate; 2-hydroxypropyl (meth)acrylate; 2-ethylhexyl (meth)acrylate; butoxethyl (meth)acrylate; tetrahydrofurfuryl (meth)acrylate; linear or branched alkyl (meth)acrylates; n-hexyl (meth)acrylate; cyclohexyl (meth)acrylate; isobornyl (meth)acrylate; ethoxylated alkyl (meth)acrylates; dicyclopentenyl (meth)acrylate; diethylene glycol (meth)acrylate; ethoxydiethylene glycol (meth)acrylate; benzyl (meth)acrylate; polyethylene glycol(meth)acrylate; polypropylene glycol (meth)acrylate; methoxypolyethylene glycol (meth)acrylate; methoxypolypropylene glycol (meth)acrylate; 2-phenoxyethyl (meth)acrylate; phenoxypolyethylene glycol (meth)acrylate; alkylphenoxyethyl (meth)acrylate; alkylphenoxypolyalkylene glycol (meth)acryate; 2-hydroxy-3-phenyloxypropyl (meth)acrylate; tetra-hydrofurfuryloxypropylalkylene glycol (meth)-acrylate; dicyclopentenyloxypolyalkylene glycol (meth)acrylate; 2-hydroxyalkyl (meth)acryloyl phosphate; polyfluroalkyl (meth)acrylate; N-vinyl pyrrolidone; N-vinyl caprolactam; diacetone (meth)acrylamide; isobutoxymethyl (meth)acrylamide; N,N-dimethyl acrylamide; t-octyl (meth)acrylamide; dialkylaminoethyl (meth)acrylate; (meth)acryloylmorphoine; or mixtures thereof (e.g., col. 7 line 9 to col. 8 line 27). Thus claim 84 is rejected.

Komiya et al. teaches wherein the linear or branched alkyl (meth)acrylates are selected from butyl (meth)acrylate, octyl-(meth)acrylate, decyl (meth)acrylate, tridecyl (meth)acrylate, stearyl (meth)acrylate, lauryl (meth)acrylate, or isodecyl (meth)acrylate (e.g., col. 7 line 9 to col. 8 line 27). Thus claim 85 is rejected.

Komiya et al. teaches wherein the ethoxylated alkyl (meth)acrylates, are selected from methoxyethyl (meth)acrylate, ethoxylethyl (meth)acrylate, butoxyethyl (meth)acrylate, or 2-(2-ethoxyethoxy)ethyl (meth)acrylate (e.g., col. 7 line 9 to col. 8 line 27). Thus claim 86 is rejected.

Although Komiya et al. may not explicitly state "nonylphenoxyethyl (meth)acrylate" it would have been obvious to do so because it was conventionally known at the time the invention was made to substitute/alternatively use "nonylphenoxyethyl (meth)acrylate" in place of ethoxylated nonylphenol acrylate that is taught by Komiya et al. (e.g., see Komiya et al. col. 12 TABLE I). Thus claim 87 is rejected.

Komiya et al. teaches wherein the monofunctional reactive diluent monomer (d) is isobornyl acrylate, 2-phenoxyethyl acrylate, nonylphenoxyethyl acrylate, C.sub.8-C.sub.13 alkyl acrylates, lauryl acrylate, or isodecyl acrylate (e.g., col. 7 line 9 to col. 8 line 27). Thus claim 88 is rejected.

Although Komiya et al. may not explicitly state "3% by weight to 25% by weight" of monofunctional reactive diluent monomer with respect to the total weight of said radiation curable composition, the said range would have been prima facie obvious via the principle of obviousness of ranges [MPEP 2144.05] since Komiya et al. does teach 3-50 wt % (e.g., col. 8 lines 25-27). Thus claim 89 is rejected.

Komiya et al. teaches wherein the radiation curable composition comprises at least one adhesion promoter (e) (col. 10 lines 42-52). Thus claim 90 is rejected.

Komiya et al. teaches wherein the adhesion promoter (e) is an organo-functional silane selected from octyltriethoxysilane, methyltriethoxysilane, methyltrimethoxysilane, tris(3-trimethoxysilylpropyl) isocyanurate, vinyltriethoxysilane, vinyltrimethoxysilane, vinyl-tris(2-

methoxyethoxy) silane, vinylmethyl-dimethoxysilane, .gamma.-methacryloxypropyltrimethoxy-silane, .beta.-(3,4-epoxcyclohexyl) ethyltrimethoxy-silane, .gamma.-glycidoxypropyltrimethoxysilane, .gamma.-mercaptopropyltrimethoxysilane, organo-modified polydimethylsiloxane, .gamma.-ureidopropyltrialkoxy-silane, .gamma.-ureidopropyltrimethoxysilane, .gamma.-isocyanatepropyltriethoxysilane, or mixtures thereof (e.g., col. 13 in the last line of TABLE 2; col. 13 lines 35-38). Thus claim 91 is rejected.

The structural formula stated in claim 92 is inherent to the .gamma.-mercaptopropyl trimethoxysilane compound taught in Komiya et al. at col. 13 in the last line of TABLE 2 (e.g., col. 13 lines 35-38). Thus claim 92 is rejected.

Although Komiya et al. may not explicitly state the range of 0.1 to 2.5% by weight of adhesion promoter/coupling agent it would have been obvious to do so because the said range was conventionally known to one of ordinary skill in the art at the time the invention was made. Thus claim 93 is rejected.

Regarding claims 61-67, MPEP Section 2114 states “APPARATUS CLAIMS MUST BE STRUCTURALLY DISTINGUISHABLE FROM THE PRIOR ART”. MPEP Section 2114 (herein “MPEP 2114”) subsequently states (i.e., see single-spaced paragraph immediately below):

>While features of an apparatus may be recited either structurally or functionally, claims < directed to > an < apparatus must be distinguished from the prior art in terms of structure rather than function. > In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board’s finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

Claims 61-63 make a statement regarding a performance measurement with regard to variation (V.sub.1) between the modulus of elasticity value measured at -40.degree. C. and the modulus of elasticity value measured at +60.degree. C. of the protective coating layer structure399. The Komiya et al. reference indicates structure, with respect to the coating compound, equivalent to the claimed coating compound structure at least as delineated by the claim rejections under Komiya in this Office action. Therefore, it is reasonable to assert that the equivalent structure of Komiya et al.'s compound/apparatus is also able to perform equivalently to the instant claimed compound/apparatus. I.e., Komiya's structure/compound/apparatus protective coating layer is capable of performing to produce variation (V.sub.1) between the modulus of elasticity value measured at -40.degree. C. and the modulus of elasticity value measured at +60.degree. C. not higher than 150 MPa, 320 MPa , and 495 MPa as stated, respectively, in claims 63, 62, and 61. Contrary to that which is suggested in the above MPEP 2114 entry, the subject matter of claims 61-63 is not "distinguished from the prior art in terms of structure rather than function". Thus claims 61-63 are rejected.

Claim 64 makes a statement regarding a performance measurement, e.g. the equilibrium modulus (E.M.), of the chemical compound structural apparatus. The Komiya et al. reference indicates structure equivalent to the claimed structure at least as delineated by the claim rejections under Komiya in this Office action. Therefore, it is reasonable to assert that the equivalent structure of Komiya et al.'s compound/apparatus is also able to perform equivalently to the instant claimed compound/apparatus. I.e., Komiya's structure/compound/apparatus protective coating layer is capable of performing to produce an E.M. of higher than 5 MPa.

Contrary to that which is suggested in the above MPEP 2114 entry, the subject matter of claim 64 is not "distinguished from the prior art in terms of structure rather than function". Thus claim 64 is rejected.

Claims 65-67 make a statement regarding a performance measurement with regard to microbending variation using a specific device to wind the coated fiber on. The Komiya et al. reference indicates structure, with respect to the coating compound, equivalent to the claimed coating compound structure at least as delineated by the claim rejections under Komiya in this Office action. Therefore, it is reasonable to assert that the equivalent structure of Komiya et al.'s compound/apparatus is also able to perform equivalently to the instant claimed compound/apparatus when used on the said specific device for winding. I.e., Komiya's structure/compound/apparatus protective coating layer is capable of performing to produce a microbending variation not higher than 6 (dB/km)/(g/mm), 15 (dB/km)/(g/mm), and 20 (dB/km)/(g/mm) as stated, respectively, in claims 67, 66, and 65. Contrary to that which is suggested in the above MPEP 2114 entry, the subject matter of claims 65-67 is not "distinguished from the prior art in terms of structure rather than function". Thus claims 65-67 are rejected.

Each and every element of each of claims 94-105 is rendered as obvious under Komiya et al. by the reasons and references given above and/or art-established principles that were conventionally known in the art at the time the invention was made. Thus claims 94-105 are rejected.

By the reasons and references given above and/or art-established principles that were conventionally known at the time the invention was made each and every element of each of

method claims 106 and 112 is rendered as obvious under Komiya et al. (e.g., col. 10 lines 62-67; see MPEP 2144.05) Thus method claims 106, 112 are rejected.

## *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL P. MOONEY whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Michael P. Mooney/
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8/3/09